

Quartersawing Oak

AS A BUSINESS STRATEGY

**Scott Smith's Quartersawn Oak Company,
QuarterSawnOak.Com, New Hill, North Carolina**

Scott Smith of Chatham County, North Carolina, is pursuing one of the small sawmill niche markets as the focus of his business strategy. Scott knows there are enough lumber buyers nationally who value high-quality oak lumber—that shows a strong ray flake pattern—to profitably sustain his small sawmill business. Since 2008, Scott has steadily been adding equipment, capabilities, and improvements to his facilities, and he has developed into one of the top vendors for quartersawn oak in the United States.

You can view Scott's website (www.quartersawnoak.com) where his offerings are presented by product type and species. The majority of his sales come from online viewers, and he puts a high priority on having a good website domain name and supporting it with great content and a high search ranking.

Quartersawing and Rift-Sawing

Quartersawing and rift-sawing are often confused, as there is some overlap in definitions as well as the techniques where a sawyer attempts to create boards that have the annual rings of the log run vertically in the thickness of a board so as to show off the ray flake. There are several different industry-recognized organizations that provide information about quarter- and rift-sawn lumber. These include the USDA Forestry Products Lab (FPL), the National Hardwood Lumber Association (NHLA), the National Hardwood Flooring Manufacturers Association (NHFMA), and the Architectural Woodworking Institute



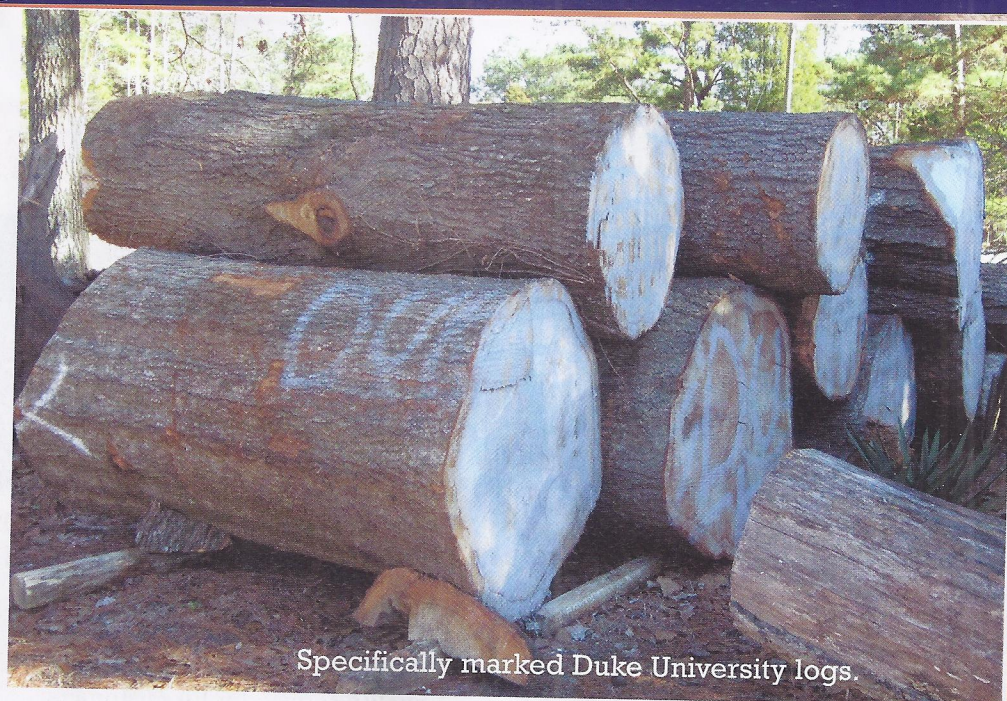
Scott air dries slabs in a covered shed.

(AWI). Professor Bruce Hoadley also has a specification in his book *Understanding Wood*.

Unfortunately these different organizations have different definitions of what constitutes quarter- and rift-sawn lumber. Scott follows the AWI specification, which defines quartersawn lumber as having annual growth ring orientation between 60 degrees and 90 degrees relative to the face of the board, and rift-sawn lumber as measured by annual growth ring orientation between 30 degrees and 60 degrees to the face of the board, with 45 degrees being optimum.

The Sawmills

Three sawmills are available to mill boards and slabs, including a large Baker band saw mill Model 3638D, a Peterson Winch Production Frame swing blade mill for quartersawing logs, and a dedicated slabbing mill that he and a friend fabricated using a Peterson saw frame assembly as the starting point. The slabbing mill is used to quarter large logs for subsequent milling on the Baker band mill, or to produce live-edge slabs for custom furniture makers. By adding eccentric tensioning springs to preload and reduce the deflection in the long chain saw bar, Scott can mill slabs up to 72 inches wide. Since the Peterson and dedicated slabbing mill operate on a single 65-foot-long track, he can also mill long timbers for timber frame and log homes.



Specifically marked Duke University logs.

What the Company Offers

While QuarterSawnOak.Com offers red and white oak, it also offers other species such as sycamore and black walnut. Scott operates his sawmill business with the help of a loyal dog, Ricochet, or “Shea” for short, and one or more employees, as needed.

Specialized services include the handling of “heritage logs” sawn to customer specifications, with optional kiln drying, and “treecycling,” whereby mid- and large-size urban logs are milled for lumber instead of being sent to the dump. Scott has also developed a relationship with local colleges, including Duke University whose log ends are spray painted with Duke blue paint when they come into the log yard to keep them separated from other logs and lumber.

With the ability to produce over-size and overlength timbers for timber frame homes, QuarterSawnOak.Com is increasingly turned to for these products. Recently they provided some 12 inch x 16 inch x 43 foot red oak timbers for use in a timber frame style restaurant outside of Washington, D.C.

The dehumidification dry kiln uses a shipping container as the kiln with a Nyle L200 dehumidification unit. The kiln is operated based on the load on the compressor. Scott can load 4,000 board feet of green 4/4 and 5/4 quarter- and rift-sawn oak boards or 6,000 board feet of air-dried slabs. The drying cycle for green oak boards may be six to seven weeks, while the cycle for air-dried slabs may be two weeks. Scott uses a Wood-Mizer 2000 control system to manage the



Left to right: the Baker 3638D band sawmill; Peterson swingblade sawmill sawing quartersawn white oak boards; and the chain saw mill made by Scott on a Peterson frame.

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Left to right: glued bench tops made from slab stock; Grizzly resaw producing veneer from cants; and crane placing a 43-ft.-long log for sawing.

kiln using set points for temperature and relative humidity. He also uses a Delmhorst Kil-Mo-Trol Plus system to monitor the shell and core moisture contents of thick boards and slabs to maintain a reasonable shell-to-core moisture gradient. The recent acquisition of a used solar dry kiln based on research efforts at Virginia Tech University enables Scott to adjust the vents to vary the drying conditions when predrying thick green and air-dried boards and slabs.

At QuarterSawnOak.Com, customers have a lot of options for quartersawn products, which is just how Scott likes it. He can provide sawn veneer on his 16-inch-wide Grizzly resaw; thin veneer that can be glued onto plywood or HDF/MDF for furniture and flooring products; or any number of value-added services for planing and sanding, using his industrial-quality Oliver jointer-planer and wide belt sander.

Shipping lumber depends on the sizes of the boards and slabs as well as the size of the order. Given his strong Internet presence, most of his customers are out of state, and so he primarily ships via package carriers and LTL trucking lines, always noting his location as a business to obtain better shipping rates. The vertical racking storage area Scott uses to sort and organize boards for shipping orders also serves as a convenient way for local residents to look at boards they might want.

Overall Scott has done well by

focusing his operation on a specific market niche. He operates with quality equipment and offers high-quality service for his customers who are looking for quartersawn boards and slabs that are out of the mainstream of your typical small sawmill operation. ■

Harry Watt is a Wood Products Specialist in the Wood Products Extension Department at North Carolina State University and works in the forest and wood products industry. He hosts workshops for small sawmills and firewood businesses at the Wood Education and Resource Center, at Princeton, West Virginia. Harry lives in Iredell County, North Carolina.



A joint-free wooden gutter made with a swingblade sawmill.



Slabbing blade at work on a log at Meredith College.